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DATE MAILED: 01/18/96

This is a communication from the examiner in charge of your application.
COMMISSIONER OF PATENTS AND TRADEMARKS

☑ This application has been examined ☑ Responsive to communication filed on 5/24/95 ☐ This action is made final.

A shortened statutory period for response to this action is set to expire 3 month(s), ~ days from the date of this letter.
Failure to respond within the period for response will cause the application to become abandoned. 35 U.S.C. 133

Part I THE FOLLOWING ATTACHMENT(S) ARE PART OF THIS ACTION:

1. ☑ Notice of References Cited by Examiner, PTO-892.
2. ☑ Notice of Draftsman's Patent Drawing Review, PTO-948.
3. ☐ Notice of Art Cited by Applicant, PTO-1449.
4. ☐ Notice of Informal Patent Application, PTO-152.
5. ☐ Information on How to Effect Drawing Changes, PTO-1474.
6. ☐ _____.

Part II SUMMARY OF ACTION

1. ☑ Claims 1-25 are pending in the application.
   Of the above, claims 12-15 are withdrawn from consideration.
2. ☐ Claims _____ have been cancelled.
3. ☐ Claims _____ are allowed.
4. ☑ Claims 1-11 & 16-25 are rejected.
5. ☐ Claims _____ are objected to.
6. ☐ Claims _____ are subject to restriction or election requirement.
7. ☑ This application has been filed with informal drawings under 37 C.F.R. 1.85 which are acceptable for examination purposes.
8. ☐ Formal drawings are required in response to this Office action.
9. ☐ The corrected or substitute drawings have been received on _____. Under 37 C.F.R. 1.84 these drawings are ☐ acceptable; ☐ not acceptable (see explanation or Notice of Draftsman's Patent Drawing Review, PTO-948).
10. ☐ The proposed additional or substitute sheet(s) of drawings, filed on _____. has (have) been ☐ approved by the examiner; ☐ disapproved by the examiner (see explanation).
11. ☐ The proposed drawing correction, filed _____, has been ☐ approved; ☐ disapproved (see explanation).
12. ☐ Acknowledgement is made of the claim for priority under 35 U.S.C. 119. The certified copy has ☐ been received ☐ not been received ☐ been filed in parent application, serial no. _____ ; filed on _____.
13. ☐ Since this application appears to be in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under Ex parte Quayle, 1935 C.D. 11; 453 O.G. 213.
14. ☐ Other

EXAMINER'S ACTION

Part III DETAILED ACTION

Election/Restriction

Restriction to one of the following inventions is required under 35 U.S.C. 121:

Group I. Claims 1-11 and 16-25, drawn to recombinant expression vectors, host cells, and methods of producing heterologous proteins, classified in Class 435, subclass 320.1, 254.2, and 69.1.

Group II. Claims 12-15, drawn to proteins, classified in Class 530, subclass 350.

The inventions are distinct, each from the other because of the following reasons:

Inventions I and II are related as process of making and product made. The inventions are distinct if either or both of the following can be shown: (1) that the process as claimed can be used to make other and materially different product or (2) that the product as claimed can be made by another and materially different process (M.P.E.P. § 806.05(f)). In the instant case the proteins claimed can be made by a materially different process such as isolating the proteins from their native source.

Because these inventions are distinct for the reasons given above and have acquired a separate status in the art as shown by their different classification, the search required for Group I

Group I is not required for Group II, and have acquired a separate status in the art because of their recognized divergent subject matter, restriction for examination purposes as indicated is proper.

During a telephone conversation with Janet Hasak on 1/5/96 a provisional election was made with traverse to prosecute the invention of Group I, claims 1-11 and 16-25. Affirmation of this election must be made by applicant in responding to this Office action. Claims 12-15 are withdrawn from further consideration by the Examiner, 37 C.F.R. § 1.142(b), as being drawn to a non-elected invention.

Drawings

This application has been filed with informal drawings which are acceptable for examination purposes only. Formal drawings will be required when the application is allowed.

Specification

The following is a quotation of the first paragraph of 35 U.S.C. § 112:

> The specification shall contain a written description of the invention, and of the manner and process of making and using it, in such full, clear, concise, and exact terms as to enable any person skilled in the art to which it pertains, or with which it is most nearly connected, to make and use the same and shall set forth the best mode contemplated by the inventor of carrying out his invention.

The specification is objected to under 35 U.S.C. § 112, first paragraph, as failing to provide an adequate written description of the invention and failing to adequately teach how to make and or use the invention, i.e. failing to provide an adequate written description.

The specification fails to provide an adequate description of how the expression vehicles comprising a gene for insulin-like growth factor, bovine interferon and rennin were constructed. There is no description on making an expression vehicle comprising an insulin-like growth factor or the source of the DNA used. Construction of vehicles comprising genes for bovine interferon and rennin are described on pages 21-22, however the description refers to plasmids disclosed in patent applications as the source of the DNA; this information was not available to the public at the time the invention was made. No DNA sequence information has been provided for any of these genes nor the identity of the expression vectors pertaining thereto. Since the description of said expression vehicles is inadequate, the description of cells containing them and the methods of using them to produce the corresponding proteins is also inadequate.

The specification fails to provide an enabling disclosure for making an expression vehicle comprising the gene for insulin-like growth factor, cells containing the vehicle, or methods of producing insulin-like growth factor. Since no source of a cloned

gene or its nucleotide sequence has been provided, the skilled artisan would be required to first clone the gene. No guidance or citation of relevant prior art has been provided that would enable the skilled artisan to isolate a gene encoding insulin-like growth factor. In the absence of such information the skilled artisan would be required to engage in excessive experimentation involving inventive activity in order to clone and characterize the insulin-like growth factor gene in order to construct the expression vehicle claimed or use the expression vehicle to produce the protein by the claimed methods. Such experimentation would be undue.

Claim Rejections - 35 USC § 112

Claims 9-10, 17-21, and 24-25 are rejected under 35 U.S.C. § 112, first paragraph, for the reasons set forth in the objection to the specification.

Claims 9 and 24 are rejected under 35 U.S.C. § 112, first paragraph, as the disclosure is enabling only for claims limited to human interferon alpha 1. See M.P.E.P. §§ 706.03(n) and 706.03(z).

As set forth *supra* in the objection to the specification, the written description of the construction of expression vehicles comprising the genes for bovine interferon and rennin,

was inadequate because the plasmid source of the DNA was not adequately described, i.e. available to the public, and no nucleotide sequence for these genes was provided. Also, no expression vehicle has been identified that contains these genes.

With respect to the gene for tissue plasminogen activator, the application discloses plasmid p68, comprising the gene for tissue plasminogen activator, that is encompassed by the definitions for **biological material** set forth in 37 C.F.R. § 1.801. Because it is apparent that this biological material is essential for practicing the claimed invention, i.e. expression of tissue plasminogen activator, it must be obtainable by a reproducible method set forth in the specification or otherwise be known and readily available to the public as detailed in 37 C.F.R. §§ 1.801 through 1.809.

It is unclear whether this biological material is known and readily available to the public or that the written instructions are sufficient to reproducibly construct this biological material from starting materials known and readily available to the public. Accordingly, availability of such biological material is deemed necessary to satisfy the enablement provisions of 35 U.S.C. § 112. If this biological material is not obtainable or available, the requirements of 35 U.S.C. § 112 may be satisfied by a deposit of the biological material. In order for a deposit to meet all criteria set forth in 37 C.F.R. §§ 1.801-1.809,

applicants or assignee must provide assurance of compliance with provisions of 37 C.F.R. §§ 1.801-1.809, in the form of a declaration or applicant's representative must provide a statement. The content of such a declaration or statement is suggested by the enclosed attachment. Because such deposit will not have been made prior to the effective filing date of the instant application, applicant is required to submit a verified statement from a person in a position to corroborate the fact, which states that the biological material which has been deposited is the biological material specifically identified in the application as filed (37 C.F.R. § 1.804). Such a statement need not be verified if the person is an agent or attorney registered to practice before the Office. Applicant is also reminded that the specification must contain reference to the deposit, including deposit (accession) number, date of deposit, name and address of the depository, and the complete taxonomic description.

Since no accessible source of a cloned gene or its nucleotide sequence has been provided for the bovine interferon or rennin, and it is not clear that the plasmid source of the tissue plasminogen activator gene, i.e. the prior art cited, was available, the skilled artisan would be required to first clone these genes in order to practice the inventions claimed. No guidance or citation of relevant prior art has been provided that

would enable the skilled artisan to isolate the necessary genes. In the absence of such information the skilled artisan would be required to engage in excessive experimentation involving inventive activity in order to clone and characterize the insulin-like growth factor gene in order to construct the expression vehicle claimed or use the expression vehicle to produce the protein by the claimed methods. Such experimentation would be undue.

Claims 2-4, 7-8, 16, 18-19, and 22-23 are rejected under 35 U.S.C. § 112, first paragraph, as the disclosure is enabling only for claims limited to a yeast organism containing an expression vehicle comprised of DNA encoding the first 85 amino acids of yeast alpha mating factor pre-sequence ending with arginine operably connected in translation reading frame to DNA encoding the mature human interferon alpha 1. See M.P.E.P. §§ 706.03(n) and 706.03(z).

The specification is unclear on what constitutes the pre-sequence, the pro-sequence or the pre-pro peptide of the mating factor pre-pro polypeptide (page 9, lines 14-17). In view of the examples, it has been assumed that the pre-sequence and pre-pro peptide corresponds to an N-terminal peptide of alpha factor with a carboxy terminus ending with Lys-Arg or a Glu-Ala dipeptide. With regard to claims 2-4, 7-8, 18-19, and 22-23, the "protein"

recited in the claims that is secreted or recovered has been assumed to be mature protein since the only protein recited in the claims is encoded by DNA that encodes a "mature protein". Claims drawn to expression vehicles and yeast organisms transformed with the expression vehicles are included in this rejection as the specification teaches only using these products for the production of the heterologous proteins encoded by the expression vehicles "in discrete form unaccompanied by any substantial peptide presequence or other artifact of expression, as a product of yeast expression, processing and secretion" (see specification, page 6, lines 6-22).

The specification teaches at page 2, lines 10-17 that at the time the invention was made that secreted proteins have evolved with signal sequences that are well suited for secretion of that particular protein through a cell membrane. At page 4, lines 25-27, it is taught that the secretory processes in yeast were not fully understood. It is also stated at page 16, lines 15-17 that the processing steps for yeast precursor proteins are unpredictably different from those of mammalian precursor proteins.

The specification provides only a single working example of a yeast transformed with an expression vehicle which produces a mature heterologous protein, at pages 25-27, wherein the protein is initially expressed as a fusion with an N-terminus pre-

sequence of the first 85 amino acids ending with Arg of yeast alpha mating factor pre-pro protein fused to the mature interferon polypeptide. The specification discloses yeast which can secrete other heterologous proteins that are initially expressed as a fusion with an 89 amino acid pre-sequence having two Glu-Ala repeats. However, as disclosed on page 20, no "mature" human interferon alpha 1 was produced as the species produced retained both Glu-Ala repeats, and on page 25, only 24% of the bovine interferon produced was processed was "mature", with the major species retaining both Glu-Ala repeats. It is noted that the "mature" protein in these two cases comprised N-terminal amino acids not present in the native mature proteins, being an artifact of the construction of the fusion gene. It is not clear from these results whether fusion proteins lacking these additional amino acids would be properly processed and secreted. Of the remaining examples described by Table I, only trace amounts of rennin and tissue plasminogen activator were secreted and the secreted proteins were not analyzed with respect to complete or proper processing. However based on the results with the two interferon species, one of skill would expect that the other proteins would also be incompletely processed.

Szebo et al. (1986) disclose that 95% of a consensus interferon expressed as a pre-pro-alpha-factor fusion protein with or without Glu-Ala repeats at the processing site was

retained in the cell (page 5859, col. 2 para. 1; Fig. 3, page 5860). Of the secreted protein, the majority of the protein secreted from the construct having the repeats was properly processed, while 50% of the protein produced from the construct lacking the repeats was unprocessed, i.e. not cleaved at Lys-Arg (page 5860). Szebo et al. disclose in contrast to their findings, work by others indicated that gene fusions containing the Glu-Ala repeats resulted in the secretion of heterologous proteins with incompletely processed N-termini (page 5860, col. 2).

The specification teaches generally that at the time the invention was made, the secretory process of yeast was not well understood. The results disclosed in the specification and by Szebo et al., well after the time the invention was made, indicate that secretion of "mature" protein using an alpha factor pre-sequence was unpredictable. Since the specification provides only a single working example of a yeast capable of secreting a mature heterologous protein, the breadth of the claim is not commensurate in scope with the enabling disclosure. It would therefore require undue experimentation for one skilled in the art to practice the invention as claimed in order to modify the vectors to ensure proper processing of any heterologous protein fused to alpha factor pre-sequences.

Claims 1-11 and 16-25 are rejected under 35 U.S.C. § 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention. Specifically:

Claims 1-11 and 18-25 are indefinite for recitation of "the DNA sequence" in claims 1-6 and 8, which lacks antecedent basis.

Claims 1, 6-7, 9-11, 18, 2, and 22 are indefinite for recitation of "the promoter" in claims 1 and 6, which lacks antecedent basis.

Claims 2-5, 7-8, and 18-23 are indefinite for recitation of "substantially the pre-pro peptide of yeast alpha factor" in claims 2-4 and 7-8. First, "the pre-pro peptide" lacks antecedent basis. Second, "the pre-pro peptide" has not been defined in the specification and is unclear on what constitutes the pre-sequence or the pre-pro peptide of the mating factor pre-pro polypeptide (page 9, lines 14-17), and therefore what constitutes "substantially" in reference to the pre-pro peptide. The description of the "signal (pre-pro) peptide" at page 10, lines 19-27 of the specification, it would appear that the carboxy terminal end of the "pre-pro peptide" is a processing site.

Claims 16-17 are indefinite for recitation of "capable of producing" in claim 16. The use of "capable of" suggests a latent property and the claim does not recite the conditions under which

the organism will or will not produce the protein. It is suggested that --which produces-- be substituted.

Claim Rejections - 35 USC § 102

The following is a quotation of the appropriate paragraphs of 35 U.S.C. § 102 that form the basis for the rejections under this section made in this Office action:

> A person shall be entitled to a patent unless --
> (e) the invention was described in a patent granted on an application for patent by another filed in the United States before the invention thereof by the applicant for patent, or on an international application by another who has fulfilled the requirements of paragraphs (1), (2), and (4) of section 371(c) of this title before the invention thereof by the applicant for patent.

Claims 1-8, 11, 16, and 22-23 are rejected under 35 U.S.C. § 102(e) as being anticipated by Kurjan et al. The claims are drawn to yeast expression vehicles comprising DNA encoding heterologous proteins, which can be a mature protein, operably connected to the yeast alpha factor promoter and/or in translation reading frame to DNA encoding the pre-pro peptide of yeast alpha factor, yeast organisms transformed with such vectors, and methods of producing heterologous proteins or mature heterologous proteins from cultures containing such cells or more specifically from the media as secreted protein.

Kurjan et al. (U.S. 4,546,082) disclose yeast expression vehicles comprising a fusion of a segment of the yeast alpha factor gene, encoding the first 89 amino acids of the precursor

protein, and DNA encoding mature heterologous proteins, such that a fusion protein is produced and secreted from cells containing such vehicles, followed by isolation of the protein from the media (Abstract; Fig. 1, 3-5; col. 5, lines 20-36, col. 10-12). It is presumed that the alpha factor promoter was present on the vector used since the 1.7 kb EcoRI fragment (R1-2) containing the alpha factor gene was sufficient to direct expression of alpha factor (Table 2, col. 8).

Claims 1-8, 11, 16 and 22-23 are rejected under 35 U.S.C. § 102(e) as being anticipated by Brake et al. (U.S. 4,914,026). The claims are drawn to yeast expression vehicles comprising DNA encoding heterologous proteins, which can be a mature protein, operably connected to the yeast alpha factor promoter and/or in translation reading frame to DNA encoding the pre-pro peptide of yeast alpha factor, yeast organisms transformed with such vectors, and methods of producing heterologous proteins or mature heterologous proteins from cultures containing such cells or from the media as secreted protein.

Brake et al. disclose an expression vehicle for the production of "mature" proinsulin, i.e. processed to remove alpha factor sequences, secreted into the culture media which comprise DNA encoding proinsulin fused in translation reading frame at its N-terminus with a segment of the alpha factor gene comprising its

promoter and the pre-pro polypeptide (up to the HindIII site)(col. 6, lines 42-59), yeast cells containing the expression vehicle, and methods of producing and isolating the secreted protein (col. 3, line 9 to 40; col. 4, line 56 to col. 5, line 9; col. 8, lines 10-57).

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. § 103 which forms the basis for all obviousness rejections set forth in this Office action:

> A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.
>
> Subject matter developed by another person, which qualifies as prior art only under subsection (f) or (g) of section 102 of this title, shall not preclude patentability under this section where the subject matter and the claimed invention were, at the time the invention was made, owned by the same person or subject to an obligation of assignment to the same person.

Claims 9, 18-19, and 24 are rejected under 35 U.S.C. § 103 as being unpatentable over Kurjan et al. in view of Goeddel et al. The claims are drawn to yeast expression vehicles comprising DNA encoding mature human interferon operably connected to the yeast alpha factor promoter and/or in translation reading frame to DNA encoding the pre-pro peptide of yeast alpha factor, yeast

organisms transformed with such vectors, and methods of producing and isolating human interferon from cultures containing such cells or more specifically from the media as secreted protein.

Kurjan et al. (U.S. 4,546,082) disclose yeast expression vehicles comprising a fusion of a 5' segment of the yeast alpha factor gene, encoding the first 89 amino acids of the precursor protein, and DNA encoding mature heterologous proteins, such that a fusion protein is produced and secreted from cells containing such vehicles, followed by isolation of the protein from the media (Abstract; Fig. 1, 3-5; col. 5, lines 20-36, col. 10-12). It is presumed that the alpha factor promoter was present on the vector used since the 1.7 kb EcoRI fragment (R1-2) containing the alpha factor gene was sufficient to direct expression of alpha factor (Table 2, col. 8). Kurjan et al. suggest fusing the coding information for useful proteins, such as interferon, to the N-terminal segment of the alpha-factor gene for secretion of the protein lacking superfluous amino acids from the yeast into the media (col. 3, lines 10-17). The reference also teaches that industrial production of mammalian proteins from yeast may have advantages over production from bacteria since the presence of mammalian proteins may have an adverse effect on bacterial cell metabolism and the yeast secretion and processing system is known to be similar to other eukaryotes (col. 2, lines 31-45). The

reference does not teach either a source of interferon DNA or the DNA sequence.

Goeddel et al. teach the cloning and nucleotide sequence of pre- and mature human interferon gamma (Fig. 4-5).

It would have been obvious to one of ordinary skill in the art at the time the invention was made to use the DNA encoding the mature interferon gamma as taught by Goeddel et al. in the expression system of Kurjan et al. with a reasonable expectation of success. One would have been motivated to do so because of the explicit teaching by Kurjan et al. that interferon could be produced by their expression system.

Double Patenting

The non-statutory double patenting rejection, whether of the obvious-type or non-obvious-type, is based on a judicially created doctrine grounded in public policy (a policy reflected in the statute) so as to prevent the unjustified or improper timewise extension of the "right to exclude" granted by a patent. *In re Thorington,* 418 F.2d 528, 163 USPQ 644 (CCPA 1969); *In re Vogel*, 422 F.2d 438, 164 USPQ 619 (CCPA 1970); *In re Van Ornam*, 686 F.2d 937, 214 USPQ 761 (CCPA 1982); *In re Longi*, 759 F.2d 887, 225 USPQ 645 (Fed. Cir. 1985); and *In re Goodman*, 29 USPQ2d 2010 (Fed. Cir. 1993).

A timely filed terminal disclaimer in compliance with 37 CFR 1.321 (b) and (c) may be used to overcome an actual or provisional rejection based on a non-statutory double patenting ground provided the conflicting application or patent is shown to be commonly owned with this application. See 37 CFR 1.78 (d).

Effective January 1, 1994, a registered attorney or agent of record may sign a Terminal Disclaimer. A Terminal Disclaimer signed by the assignee must fully comply with 37 CFR 3.73(b).

Claims 2-5, 7-8, 16, 18-19, and 22-23 are provisionally rejected under the judicially created doctrine of obviousness-type double patenting as being unpatentable over claims 8 and 19-21 of copending application Serial No. 07/552,719. Although the conflicting claims are not identical, they are not patentably distinct from each other because: the expression vehicles of claims 8 and 20 of the '719 application are encompassed by claims 7-8 and 18-19, respectively, of the instant application; the processes of claims 19 and 21 of the '719 application are encompassed by those of claims 2-5 and 16 of the instant application; and the processes of claims 19 and 21 produce yeast organisms that are encompassed by claims 16, and 22-23 of the instant application. The main difference between the claims of the two applications is that the alpha factor pre-pro peptide recited in the claims of the '714 application are limited to sequences lacking the Glu (or Asp)-Ala dipeptides, whereas the pre-pro peptides recited in the claims of the instant application are not so limited. Clearly the practice of the inventions of the '719 application would infringe on the claims of the instant application.

This is a *provisional* obviousness-type double patenting rejection because the conflicting claims have not in fact been patented.

Conclusion

No claims are allowed.

Certain papers related to this application may be submitted to Art Unit 1805 by facsimile transmission. The FAX number is (703) 308-4312. The faxing of such papers must conform with the notices published in the Official Gazette, 1156 OG 61 (November 16, 1993) and 1157 OG 94 (December 28, 1993) (see 37 CFR 1.6(d)). NOTE: If applicant *does* submit a paper by FAX, the original copy should be retained by applicant or applicant's representative. NO DUPLICATE COPIES SHOULD BE SUBMITTED, so as to avoid the processing of duplicate papers in the Office.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Scott D. Priebe whose telephone number is (703) 308-7310. The examiner can normally be reached on Monday through Friday from 9 AM to 5 PM. If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Mindy Fleisher, Ph.D., can be reached on (703) 308-0407.

Any inquiry of a general nature or relating to the status of this application should be directed to the Group receptionist whose telephone number is (703) 308-0196.

SDP

Scott D. Priebe, Ph.D.
Examiner

January 13, 1996

Mindy Fleisher

MINDY FLEISHER
SUPERVISORY PATENT EXAMINER
GROUP 1800

SUGGESTION FOR DEPOSIT OF BIOLOGICAL MATERIAL ATTACHMENT

A declaration by applicant or assignee, or a statement by applicant's agent identifying a deposit of biological material and averring the following may be sufficient to overcome an objection or rejection based on a lack of availability of biological material. Such a declaration:

1. Identifies declarant.

2. States that a deposit of the material has been made in a depository affording permanence of the deposit and ready accessibility thereto by the public if a patent is granted. The depository is to be identified by name and address. (See 37 C.F.R. § 1.803).

3. States that the deposited material has been accorded a specific (recited) accession number.

4. States that all restrictions on the availability to the public of the material so deposited will be irrevocably removed upon the granting of the patent. (See 37 C.F.R. § 1.808(a)(2)).

5. States that the material has been deposited under conditions that assure that access to the material will be available during the pendency of the patent application to one determined by the Commissioner to be entitled thereto under 37 C.F.R. § 1.14 and 35 U.S.C. § 122. (See 37 C.F.R. § 1.808(a)(1)).

6. States that the deposited material will be maintained with all the care necessary to keep it viable and uncontaminated for a period of at least five years after the most recent request for the furnishing of a sample of the deposited microorganism, and in any case, for a period of at least thirty (30) years after the date of deposit or for the enforceable life of the patent, whichever period is longer. See 37 C.F.R. § 1.806).

7. That he/she declares further that all statements made therein of his/her own knowledge are true and that all statements made on information and belief are believed to be true; and further, that these statements were made with knowledge that willful false statements and the like so made are punishable by fine or imprisonment, or both, under Section 1001 of Title 18 of the United States Code and that such willful false statements may jeopardize the validity of the instant patent application or any patent issuing thereon.

Alternatively, it may be averred that deposited material has been accepted for deposit under the Budapest Treaty on the International Recognition of the Deposit of Microorganisms for the Purposes of Patent Procedure (e.g., see 961 OG 21, 1977) and that all restrictions on the availability to the public of the material so deposited will be irrevocably removed upon the granting of a patent.

Additionally, the deposit must be referred to in the body of the specification and be identified by deposit (accession) number, date of deposit, name and address of the depository, and the complete taxonomic description.